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LITTON MELLONICS SYSTEMS DEVELOPMENT DIV ARLINGTON VA  
TOWARD A NAVAL TEAM TAXONOMY.(U)

F/G 5/9

DEC 80 C M KNERR, L B NADLER, L E BERGER

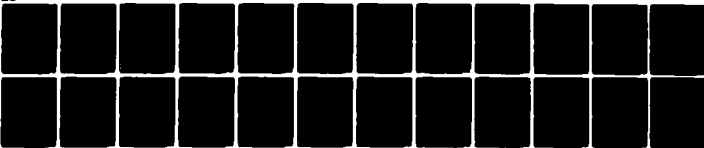
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END  
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DTIC

- o Tactical Data System (TDS) operator and team training
- o Weapons Direction Equipment/Weapons Direction System (WDE/WDS) team training
- o Carrier Controlled Approach (CCA) team training (SPN35/SPN42)
- o E2A/E2B team training
- o Sea Air Rescue (SAR) team training
- o Radar-assisted piloting team training
- o Shore bombardment team training

Other TACDEW training includes:

- o Anti-air warfare training (Air intercept controller (AIC) Gun and Missile) for TDS and non-TDS units
- o ASW training
- o Amphibious training
- o Surface tracking and tactics training
- o Live radar and air intercept controller training

These additional training objectives may also involve team activities but team processes are not evident from the training descriptions.

Performance measurement has two forms: manual and automated. The manual system consists of evaluations by trainers who assess performance of individuals within the team and compile a total weighted score. The data instruments are checklists of the performance items required along with the weights, assigned according to judged importance of the performance. The cumulation of individual team member scores is the team score.

The TACDEW computer stores exercise data and trainee responses. The information can be reproduced for evaluation and training feedback in the debriefing. TACDEW has the capability for powerful evaluation methods,

but these have not been realized to date; their potential is described in a subsequent section.

TACDEW Training Center-Atlantic. Team training in this center is tailored to the crew of the ship to be trained. The training cadre designs training based on the stated needs of the Commanding Officer. The first exercise is of average difficulty, and subsequent exercises are adapted in difficulty to meet the needs of the crew once their proficiency level is assessed. However, performance is not measured during training. The crew is rated as satisfactory or unsatisfactory at the end of the training program, based on the judgement of the trainers. Three types of team training are offered:

- o CIC team training-basic procedures, in a simulated single ship setting.
- o Multithreat CIC team training-in a Fleet multithreat setting, the crew has exercises in AAW, ASW, EW, and surface warfare activities.
- o Radar Navigation CIC team training-using a radar navigation mock-up, CIC teams practice all phases of shipboard radar navigation.

Feedback is provided at the time that an error is noted by training personnel. At the debriefing, key decision points are discussed and positive feedback is provided as appropriate.

Performance measurement in TACDEW is accomplished by evaluators who observe the behavior of the crew members during TACDEW exercises and score them on checklists. The checklists have weights designated for each behavior; the weighted sum of the performance scores constitutes the score for the individual. The sum of the individual scores is the score for the team. (Note: This performance evaluation system was

observed at the San Diego facility. Some other system may be used at the Dam Neck TACDEW facility. We have requested copies of the evaluation forms from both facilities).

More rigorous performance measurement applicable in the TACDEW environment may be designed by applying research conducted by Chesler on the development of an objective, automated performance measurement system for TACDEW (1971, 1972). Chesler noted that TACDEW, as a computer-based simulation setting, provided performance measures that are not otherwise obtainable. Automated, synthetic environments can supply data on both the correct system responses and the responses actually made by the trainee. The comparison of actual with correct responses is central to Chesler's measurement methodology.

Chesler's methodology has six steps (Table IV-1). First is the identification of "system entities" or portions of the total man-machine system to be examined. Chesler selected six TACDEW modules, as follows:

1. Total Anti-Air Warfare
2. Air Intercept Control (AIC)
3. Carrier Controlled Approach (CCA)
4. Surface Operations
5. Electronic Warfare (EW)
6. Weapons Direction

These modules correspond closely with the course organization in the San Diego TACDEW facility. Some are single team operations while others involve more than one team. Individual positions could also be examined. For the purposes of the present research, single team operations are appropriate.

Table IV-1

Performance Measurement Development Steps

1. Identify System Entities
2. Identify Operations
3. Determine Performance Objectives
4. Determine Performance Variables
5. Determine Situational Variables
6. Determine Analysis and Interpretation Methods

Step 2, identification of types of operations, evolved because system entities (in this case, teams) have several types of tasks, or operations, to perform in order to complete their missions. This step is necessary in the development of performance measures to specify what measurement objectives must be considered, and it is necessary in the development of a team taxonomy because military teams are, to a large extent, defined by their operations and missions. Examples of Surface Operations are transit, surface engagement, shore bombardment and multi-ship maneuvering. The operations (or tasks) are integrally linked to the system entities (or teams).

Chesler's third step is the development of training objectives containing the behaviors, standards, and conditions. The objectives need to be appropriate for the system entity. For example, interactive team member relationships are suitable for team performance objectives. Performance standards are clearer if they are expressed in the context of an exercise mission. An operations order conveys the performance standards, in military terms, to the exercise participants.

Development of performance variables, the fourth step, considers data elements, metrics, data sources, and recording methods. The data elements are of two types: the correct response and the trainee's actual response. Examples are error in reported bearing, response time, and target identification. The performance variable metrics include continuous scales (e.g., degrees of bearing error, minutes or seconds of elapsed time between signal appearance and detection, and percent of correct target identifications) and dichotomous scores (Yes-no scores on procedures, e.g., set polarization switch to correct position).

Chesler lists dozens of performance variables, with their appropriate metrics and data sources, for EW and AAW positions. However, these would need to be checked against the exercises actually used at the time that team performance data are collected since equipment, procedures, tactics, and doctrine change over time.

The sources of the data include the predetermined exercise environment, the trainee responses, digital data links, voice net data, and observer data. The predetermined exercise data consist of the operations orders and other supporting exercise descriptions, traces of target and friendly vehicle positions, environmental conditions, target density, and all other parameters of the exercise. The data link and voice net records are potentially valuable automatic records. Their exact number and nature need to be verified prior to any particular data collection effort. Many of the trainee responses cannot be automatically recorded in TACDEW, or, if they are recorded, cannot automatically be correlated with the correct response. For example, the trainee identifies a target and designates it with a number. The computer does not know if that target is one simulated in the exercise, or which one if several are simulated. A "best-fit" solution is possible but requires too much programming time and other expense. The final source of data, the observer, retains a vital role even with automated simulation environments.

Step 5 is the selection of situational variables. These are control variables, predetermined by the exercise designer, which establish the level of difficulty of the exercise. Examples are signal density and target speed. Chesler (1971, p.32) lists several situational variables and their metrics for an Anti-Air Warfare exercise, including wind,

magnetic variation, EW signal density, and degraded radar.

Enemy mission accomplishment is a function of both the situational variables determined for the exercise and the performance variables, including the trainees' responses. While a yes-no scoring is appropriate, overall mission accomplishment is influenced by so many factors that it is only a rough estimate of team performance.

The final step covers the analysis and interpretation of the performance data. Criterion problems plague the validation of the performance variables. The implication for the present research is that care must be exercised in using the performance variables as criterion measures to assess the effects of interpersonal, individual, or other team-specific measures. The measures of performance on the task-oriented operations are themselves suspect.

Some of the problems in interpreting performance scores or mission accomplishment evolve from the "closed-loop" exercise mode. In closed-loop exercises, the trainee alters the scenario by reacting to it. For example, the team may destroy an enemy aircraft in one exercise and not even detect it in another exercise (given the same initial exercise scenario). The way that the remainder of the exercise proceeds is quite different in the two cases. Also, some exercises are open-ended, meaning that the instructor can alter the situation to enhance the training value (adapt the training to the level of difficulty dictated by the trainees' level of proficiency). For example the instructor may reduce the target density when a team becomes overwhelmed in order to continue the exercise, then increase the density again when the team appears able to handle more difficulty. This type of flexibility is good for training but interferes with interpretation of performance data by reducing standardization of the stimulus situation.



Team Performance Data Collection in TACDEW. Chesler (1971, p.39 ff) assessed TACDEW as a vehicle for team performance research. He noted that the teams have a short training period (2-5 days for a set of 2-5 teams) and that the teams have high turnover of personnel even during that short time. TACDEW places highest priority on multi-team operations, such as multi-team AAW. However, it would be possible to examine single-team AAW. The team is from one ship, and the inputs from other ships are simulated. Scenarios, performance measures, and other supporting materials would need to be developed.

Carrier controlled approach may be suitable for team research since it involves only one mock-up and one team (size varies from 10 to 12 members). Chesler lists the team positions and provides performance and situational variables with their appropriate metrics.

Carrier controlled approach is also trained at NAS Memphis, so that an alternative data collection site is available. Preparation for the research would have to include comparison of the training objectives and other training center and situational differences that may account for differences in performance scores (other than true team variance). However, viewpoints from more than one site would help to extend the generality of the results.

For surface maneuvers, the system entity is a group of selected CIC personnel who are not necessarily a "real" team but can be trained together realistically. For the present research, we need to determine whether the group is close enough to a team to be pertinent.

Electronic Warfare has as its system entity a single team, or part of a team encompassing 1 to 8 duty positions. Chesler notes that a difficulty with EW research is the small number of performance variables

that can be recorded automatically. Some of his variable lists cover EW, however, and thus supply a start at performance measure development.

#### SUMMARY

This chapter has focused on the task-related performance output measures associated with Navy team training. However, the importance of the team training for development of the team taxonomy is the opportunity for data collection. The data will include observation of the team-specific variables and interactive team processes.

The training facilities have, for the most part, sufficient space to accomodate research personnel as observers. They also have various personnel (administrative, training, and maintenance) so that the presence of two or three scientists is little noticed. Furthermore, some of the training and administrative personnel may serve as data collectors. They would increase the number of observers and provide a valuable Navy-oriented viewpoint.

## SUMMARY

### Present Status and Future Directions

The high priority need for a system which can establish and quantify the dimensions of team interaction and performance has provided the impetus for this research. An initial difficulty entailed establishing clear parameters regarding the definition of a Naval team. Various definitions of teams and taxonomic processes were jointly considered in generating an operationalization of team variables which will comprise the classification system. Here, an extensive review of small group and team performance literature was conducted to facilitate the identification of critical team variables. A preliminary team process model was then advanced, such that salient team variables, interactions among categories, and subcomponents are identified under the superordinate concept of team member interdependence.

The next phase of the research entails the development of measures for the team dimensions included in the model. While many team variables (e.g., team size, member proficiencies, task difficulty, and task type) are easily measured, the paucity of valid and reliable techniques for assessing team interactive processes necessitates the modification of existing procedures and the development of new methodologies. Hence, considerable effort will be devoted to the creation and refinement of team interactive process measures. It is anticipated that these measures will be validated through observation of team training situation. Specifically, team trainers at Norfolk and Philadelphia are under consideration for this purpose. Teams identified through existing documentation will be typed as completely as possible using the exogenous dimensions. This will facilitate the selection of appropriate teams for observation.

After applying and validating the team taxonomic system at the fleet training centers, an attempt will be made to correlate variations in team performance with variations along specific dimensions of the model. In view of the limited number of teams that can be observed under the scope of this research effort and the constraints imposed by observing these teams in the training situation, limited results should be expected here. However, the analysis of the data taken during the observation stage is expected to indicate several important directions for subsequent research.

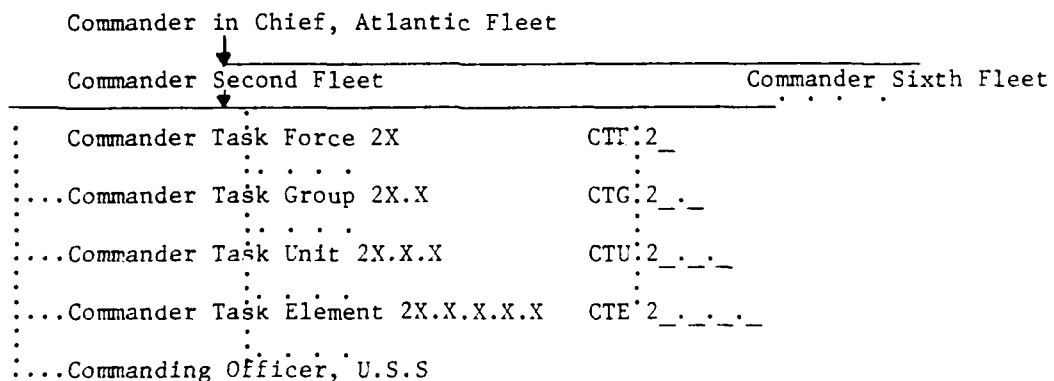
## Appendix A

### Naval Organization and Regulations

#### Fleet Organization

Because of the geographic position of the United States, the operational forces of the U.S. Navy are divided into two units, the Atlantic and Pacific fleets. The Commander in Chief, Atlantic Fleet (CinCLant) and his Pacific counterpart, CinCPacFlt, are responsible for ensuring that the ships, submarines and aircraft under their command are capable of carrying out the tasks assigned by the President and the Joint Chiefs of Staff.

Below the fleet CinC's, two distinct organizational structures, one operational, the other administrative, provide the functions necessary for naval operations. On the operational side, there are four fleets; each is responsible for operations in a more or less distinct geographic theater. These deployed fleets are the combat forces of the Navy. Units are deployed to each fleet to produce a force mix suitable to meet known or expected fleet commitments; thus, the fleets differ in the number and type of assigned units. The fleets are further subdivided into lower level (task force, task group, task unit, task element, and vessel) as shown below. The dotted lines in the figure indicate that the lower subdivisions of command may or may not be active depending on the operational situation.



#### Fleet Organization

Commander in Chief, Atlantic Fleet

Commander Naval Surface Forces, Atlantic

Commander \_\_\_\_\_ Group

Commander \_\_\_\_\_ Flotilla

Commander \_\_\_\_\_ Squadron

Commander \_\_\_\_\_ Division

Commander U.S.S. \_\_\_\_\_

#### Administrative Organization

The administrative organization provides system specific training, ship repair and overhaul, logistic support and other necessary support functions. To facilitate this support, ships of the same type are consolidated into divisions, squadrons, flotillas and groups under the overall administration of a type commander. Due to this dual structure, each ship is simultaneously responsible to two different sets of commanders. Although seemingly distinct, there is some overlap in the two structures. The ships in an administrative unit (division, squadron, flotilla, group) often deploy en masse to an operational fleet. In such a circumstance, it often happens that an administrative commander will also be given command of an operational section (task force, task group, etc.).

#### Shipboard Organization

The dual organizational structure extends to the organization of individual ships. The administrative organization, on one hand, takes care of personnel, repair and maintenance, and supply functions while the operational organization, on the other hand, handles ship and weapons system operation and damage control functions.

For administrative purposes, the ship's personnel are organized into departments, the departments into divisions, and the divisions into sections.

Regulations and guidelines governing shipboard organization are set forth in the following publications:

- U.S. Naval Regulations, 1948
- Standard Organization and Regulations of the U.S. Navy, OpNav Instruction 3120.32
- Shipboard Procedures, NWP 50 (A)
- Battle Control, NWIP 50-1
- Ship Manning Documents
- Standard Ships Organization Manual
- Battle Organization Manual
- Engineering Casualty Control Manual

U.S. Naval Regulations, 1948 is the body of public law authorizing and governing the U.S. Navy. It sets forth the basic structure of shipboard organization and the responsibilities of key individuals in the organization. One of the responsibilities is the maintenance of detailed organizational charts.

Issued under the authority of the Chief of Naval Operations, the Standard Organization and Regulations of the United States Navy is the basic guide for the day to day operations of the Navy. Among the many topics covered are both the administrative and the operational shipboard organization. OpNav Inst. 3120.32 gives the standard operational organization (watch organization) for battle conditions IV and V only. It also specifies the duties, responsibilities, authority, and status of the key officers in the organization and their relationships to each other. Figure A-1 shows the standard watch organization from OpNavInst. 3120.32. This instruction also specifies the watch organization for special situations, such as: getting underway, rescue at sea, evacuation of civilians and the like.





Shipboard Procedures, NWP 50 and Battle Control, NWIP 50-1 belong to a family of works known as Tactical Doctrine Publications. The NWP's (Naval Warfare Publications) are each considered a basic text about some specific area of naval warfare; the NWIP's (Naval Warfare Information Publications) expand and amplify the topics covered in their associated NWP's. NWP 50, among other things, takes a detailed look at the shipboard administrative organization. NWIP 50-1 sets out the general watch organization for readiness conditions I, II and III.

Ship Manning Documents (SMD's) are OpNavInst's that specify the required minimum manning for specific ships and ship classes. Each document lists the types and numbers of specialists required for the proper operation of the ship under the various battle conditions. These minimum manning requirements are based on man-hour accounting data drawn from the 3-M program (Maintenance and Material Management).

Standard Ships Organization Manual, Battle Organization Manual and Engineering Casualty Control Manual are detailed sets of instructions issued by the type commanders for each ship class, or, when there are significant differences between the ships in a given class, each ship, under their command. While these publications are based on all the publications mentioned above, they are originated one level closer to the ships themselves and take into account the design and construction features and the operational experience for the specific ships and ship classes.

Although the Navy places great store in operating "by the book" (or books, in this case), the captain of a ship has the power, and indeed the responsibility, to organize his crew to make the most efficient and effective

use of his personnel, given the special constraints of his ship's systems and operational circumstances. Toward this end each ship maintains its own Ship's Organization and Regulations Manual and detailed organizational charts. These organizational charts, called the Watch, Quarter and Station Bills, display the positions and duties of every man in the ship's crew for each of the five readiness conditions, for emergency conditions such as fire or collision, and for special conditions such as putting to sea and man overboard. These two ship-specific documents are the most detailed records of the real world shipboard operational organization.

# Appendix B

PT 5165B

TEAM NAME

## TEAM QUESTIONNAIRE

(Fill in one questionnaire for each team)

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22-23

1. How many of these teams are in your unit at present?

☐ ☐ ☐

24-26

2. What is the average number of members on this team in your unit at present? . . . . .

☐ ☐

27-28

3. What percentage of these teams in your unit are not up to full authorized strength for this team? . . . . .

☐ ☐

29-30

4. How frequently are the following types of team training used to train this team in your unit?

Team training, as opposed to individual training, focuses on the development of team skills (such as coordination and communication) and the ability of the team to perform together as an effective unit.

	Daily	Several times a week	Once a week	Several times a month	Once a month	Several times a year	Once a year	Less than once a year	Never	
a. On-the-job team training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	31
b. Unit (bn, co, plt, etc.) maneuvers, exercises, tests (FTX, ARTEP, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	32
c. Field training exercises <u>just</u> for the team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	33
d. Classroom lectures and demonstrations which emphasize team skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	34
e. Use of <u>team</u> training devices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	35
f. Special schools or courses for the team as a whole (outside the unit).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	36
g. Others (describe and give frequency):										

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5. How frequently should the following types of team training be used for this team?

	Daily	Several times a week	Once a week	Several times a month	Once a month	Several times a year	Once a year	Less than once a year	Never	
a. On-the-job team training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	37
b. Unit (bn, co, plt, etc.) maneuvers, exercises, tests (FTX, ARTEP, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	38
c. Field training exercises <u>just for the team</u> .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	39
d. Classroom lectures and demonstrations which emphasize team skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	40
e. Use of <u>team</u> training devices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	41
f. Special schools or courses for the team as a whole (outside the unit).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	42
g. Others (describe and give frequency):										

6. To what extent are the leaders in your unit satisfied with the present level of team training (even if there is none) for this team?

To no extent (completely dissatisfied)	To a little extent	To a moderate extent	To quite an extent	To a great extent (completely satisfied)*	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	43

\* If the leaders are completely satisfied skip to question number 8.

7. To what extent do the factors listed below prevent your unit from conducting additional or better team training?

	To no extent	To a little extent	To a moderate extent	To quite an extent	To a great extent	
a. Lack of programs of instruction for team training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	44
b. Lack of realistic training for the team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	45
c. Lack of trainers to conduct team training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	46
d. Lack of time to conduct team training (team has to perform other peacetime duties).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	47
e. Lack of facilities and support equipment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	48
f. Lack of <u>team</u> training devices, team training aids, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	49
g. Difficulty of keeping the team together for a sustained training program.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	50
h. Individual training is more important.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	51
i. Others (describe and indicate extent):						

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8. To what extent do each of the following characteristics apply to this team?

	To no extent	To a little extent	To a moderate extent	To quite an extent	To a great extent	
a. Except for transfers, team members on a given team are usually the same individuals from hour to hour and from day to day.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	52
b. The team's tasks are mainly composed of the activities needed to operate one or more items of equipment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	53
c. Successful task/mission performance requires team members to obtain information about the work situation and to pass it on to other team members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	54
d. Successful task/mission performance is dependent on a leader to closely coordinate the activities of all team members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	55
e. Successful task/mission performance requires team members to coordinate their activities directly with each other.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	56
f. The tasks are such that if one member cannot perform adequately (e.g., fast enough), another member can "make up for" that performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	57
g. The team members need to express a "team spirit" in their work activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	58
h. Task performance by team members is dependent on timing, quality, and/or completeness of the performance of other team members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	59
i. A team member needs to know his mates and know how they will react in certain situations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	60
j. Others (describe and indicate extent):						

9. To what extent do the factors listed below cause frequent or critical problems in the performance of this team?

	To no extent	To a little extent	To a moderate extent	To quite an extent	To a great extent	
a. Frequent turnover in team personnel (turbulence).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	61
b. Some team members are not qualified for their positions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	62
c. Inadequate amount of team training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	63
d. Team training is not meaningful or realistic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	64
e. Team is not given the opportunity to train with other units.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	65
f. Lack of team spirit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	66
g. Social problems (e.g., hostility between members).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	67
h. Lack of technically and tactically proficient leadership.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	68
i. Lack of discipline.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	69
j. Poor design of equipment that the team needs to operate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	70
k. Lack of equipment that the team would normally use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	71
l. Team is employed using inappropriate tactics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	72
m. Team is employed beyond its capabilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	73
n. Lack of communication and coordination.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	74
o. The current configuration of the team is inadequate (e.g., more or fewer members are needed or different types of personnel are needed).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	75
p. Teams are frequently understrength and thus lack the manpower to effectively perform team missions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	76
q. Others (describe and indicate extent):						

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10. During external (ARTEP, ORTT, etc.) evaluations, is the performance of this team evaluated as a complete and separate element of the unit?

Yes No Sometimes\*

☐ ☐ ☐

77

\* Explain: \_\_\_\_\_

\_\_\_\_\_

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11. a. How frequently is the performance of this team (as a separate element of the unit) internally evaluated within your unit (i.e., separate from platoon evaluations or independent evaluations of individual members)?

Daily	Several	Once a	Several	Once a	Several	Once a	Less than	Never
	times	week	times	month	times	year	once a	
	a week		a month		a year		year	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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- b. If the team is internally evaluated by unit leaders, describe the methods you use to test the team. These methods might include procedures (e.g., does the team follow the correct procedures), quantitative standards checklists (e.g., number of hits, time it takes to perform a task), and overall ratings of mission accomplishment.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

12. If this team is presently evaluated, to what extent are these evaluations a satisfactory estimate of the team's ability to perform its wartime missions.

Team is not evaluated	To no extent	To a little extent	To a moderate extent	To quite an extent	To a great extent
-----------------------------	-----------------	--------------------------	----------------------------	-----------------------	-------------------------

a. External evaluation.

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79

b. Internal evaluation.

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80

13. Please list any source documents, field manuals, TMs, ARTEPs, Training Circulars, studies or publications which can be used to obtain information about this team.
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_



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